

Supplementary Comments on Deep Water Volutidae from the South China Sea and South Africa

BY

HARALD A. REHDER

Division of Mollusks, Smithsonian Institution, Washington, D. C. 20560

(Plate 61)

ADDITIONAL MATERIAL and new information kindly furnished me by correspondents have impelled me to publish this paper as a supplement to two earlier papers of mine (REHDER, 1967; 1969) dealing with deep-water members of the family Volutidae from the South China Sea and South Africa.

For cooperation in making this contribution possible I thank the following individuals: Mr. & Mrs. Francis S. Harmon of New York City, Mr. William E. Old of the American Museum of Natural History, Mr. John E. duPont, Director of the Delaware Museum of Natural History, and Mr. Clifton S. Weaver of Honolulu, Hawaii.

As in my earlier papers I have used the initials DMNH for the Delaware Museum of Natural History and USNM for United States National Museum (now more properly known as the National Museum of Natural History).

Sigaluta pratasensis REHDER, 1967

(Plate 61, Figure 2)

1967. *Sigaluta pratasensis* REHDER, Pacific Science 21: 182; figs. 1-4

The receipt for examination of a large example of this species has induced me to place a note concerning it on record. This specimen was obtained by Mr. and Mrs. Francis S. Harmon from a fisherman in Kaohsiung, Taiwan, who is said to have obtained it from moderately deep water southwest of Taiwan. It was collected, therefore, somewhere in the South China Sea, probably between Taiwan and the Pratas Reef, which is the type locality of the species.

The specimen, now in the collection of Mr. and Mrs. Francis S. Harmon, consists of $4\frac{1}{2}$ whorls and has the following measurements: length 103.5 mm, width 53 mm, length of aperture 73.5 mm. The surface is dull, not glossy as in the young specimens on which the original description was based, and shows considerable etching by marine organisms (probably cleaned off by the collector). The color of the shell has a more grayish tone than in the holotype and paratype, being a light grayish yellowish

brown (no. 79) to brownish pink (no. 33) (ISCC-NBS color names, KELLY & JUDD, 1965). The columella is brownish with two spirally ascending plaits which are of a pale pinkish white color.

It is hoped that further examples of this species, which we now know reaches a length of at least 4 inches, will be found in the area between Taiwan, South China and the northern Philippines, and that the fishermen may be encouraged to preserve the soft parts so that its anatomy may be studied.

Fusivoluta capensis (THIELE, 1925)

(Plate 61, Figures 4, 6)

1925. *Glypteuthria* (?) *capensis* THIELE, Wiss. Ergebn. deutsch. Tiefsee-Exp. "Valdivia", 1898-99, 17 (2): 179; pl. 19, fig. 27

1959. *Fusivoluta capensis* (THIELE), BARNARD, Ann. South Afr. Mus. 45: 30-31 (in part)

I have been able to examine two color transparencies of the type of THIELE's species, taken by Mr. Hans Lehman of Black Star. From these slides, which are reproduced in black and white on Plate 61, Figures 4 and 6, I have constructed a description of this species to supplement the brief four-line description given by THIELE.

Description: Shell small, ivory-white in color, obovately fusiform in shape, suture deeply impressed, almost channeled, whorls of spire rather flattened, body whorl slightly convex. Protoconch of about 2+ (?) nuclear whorls, smooth, bulbous. Postnuclear whorls strongly axially ribbed, the ribs retractively curved, about 22-23 on last whorl. The ribs are crossed by fine spiral cords, about 10 in number on penultimate whorl, the subsutural cord pronounced, giving the suture an almost channeled appearance. Aperture narrowly ovate, the anterior canal rather broad at the slightly constricted base.

Measurements (from THIELE): Height, 11 mm; width, 4.5 mm.

Remarks: In my paper on South African deepwater volutes (REHDER, 1969, p. 205) I followed BARNARD (1959, p. 30) in synonymizing *Glypteuthria capensis* TOMLIN

(1932, p. 165) with THIELE's species. An examination of a photograph of the type of THIELE's species, however, leads me to believe that TOMLIN's species, renamed *sculpturata* TOMLIN (1945, p. 135), should, at least for the time being, be considered a distinct species.

From *Fusivoluta sculpturata* (TOMLIN) *F. capensis* differs notably in its size. The type, consisting of 6 whorls (THIELE says $5\frac{3}{4}$ whorls, but the photograph shows 6 or even slightly more whorls), measures only 11 mm, while the type of *F. sculpturata*, which TOMLIN states consisted of 7 whorls (though here again the photograph seems to show a shell of $6\frac{1}{2}$ whorls), measures 29 mm, almost 3 times as large; other specimens of *F. sculpturata* that are even somewhat larger have only 6 to $6\frac{1}{2}$ whorls. Thus, specimens of *F. sculpturata* with approximately the same number of whorls possessed by the type of *F. capensis* are almost 3 times as large as the latter. The spire of *F. capensis* THIELE is not as slender as in *F. sculpturata*, the whorls appear to be channeled, the axial ribs are more numerous (22 - 23 on the last whorl, instead of 16 - 18 as in *F. sculpturata*), the spiral cords are subequal rather than unequal, and there is a strong subsutural cord present instead of the series of 5 fine cords below the suture.

Fusivoluta sculpturata (TOMLIN, 1945)

(Plate 61, Figures 1, 3, and 5)

1932. *Glypteuthria capensis* TOMLIN, Ann. South Afr. Mus. 30: 165; fig. 6 (not THIELE, 1925)
 1945. *Glypteuthria sculpturata* TOMLIN, Journ. Conch. 22: 135
 1957. *Fusivoluta capensis* (THIELE), BARNARD, Journ. Conch. 24: 210 (not THIELE, 1925)
 1959. *Fusivoluta capensis* (THIELE), BARNARD, Ann. South Afr. Mus. 45: 30 - 31 (in part)
 1965. *Fusivoluta capensis* (THIELE), WEAVER, Hawai. Shell News 13 (3): 7; figs. 5, 6
 1969. *Fusivoluta capensis* (THIELE), REHDER, The Veliger 11: 205; pl. 42, fig. 32 (in part)

Description: Shell elongate, obovate, with rather attenuate spire, grayish white, whorls moderately convex, appressed at suture. Protoconch consisting of probably 2 (corroded) nuclear whorls; postnuclear whorls slightly shouldered and gently convex, bearing arcuate axial ribs numbering 16 to 18 on last whorl. The ribs are crossed by spiral cords sometimes varying in strength and crowded, or subequal and more or less separated; between the slight shoulder and the appressed suture the spiral cords are noticeably finer. Aperture ovate, last whorl usually not constricted at the short broad anterior canal. Operculum ovate-unguiculate, nucleus terminal.

Measurements (in mm)

	Height	Width
Holotype (from TOMLIN)	29.0	12.0
S. A. M. (from BARNARD, 1959)	38.0	15.0
DMNH 10668	30.0	13.0
DMNH 10123	29.7	11.9

Remarks: The differences between this species and *F. capensis* THIELE have already been noted above. I am assigning with some doubt the specimens in the Delaware Museum of Natural History, which I have examined, to TOMLIN's species, which I know only from the original figure and the descriptions by TOMLIN and BARNARD (1959, p. 31). The outer lip on both the Delaware specimens is imperfect, and they seem to have suffered injury of some kind; neither shows the evenly and broadly arcuate outline and lack of constriction at the anterior canal shown in TOMLIN's original figure.

In sculptural characters, however, the specimens in the Delaware Museum of Natural History agree with TOMLIN's type, with the exception that the nature of the spiral cords on the body whorl is variable; in one specimen (DMNH 10123) the cords are crowded and rather unequal as in the holotype; in the other (DMNH 10668) the cords are distant and equal. However, until further material is available and the types can be reexamined, it is better to unite all these specimens under one name.

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